

UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF NEW YORK

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PALL CORPORATION,

Plaintiff,

- against -

MEMORANDUM AND ORDER

03-CV-0092 (JS)(ETB)

CUNO INCORPORATED,

Defendant.

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SEYBERT, District Judge:

Currently pending before this Court are motions by the parties for a claim construction ruling. Both Plaintiff, Pall

Corporation ("Pall" or "Plaintiff"), and Defendant, Cuno Incorporated ("Cuno" or "Defendant"), have submitted opening briefs, oppositions, and reply briefing supporting their respective positions as to the proper claim construction that should be accorded the disputed terms.<sup>1</sup>

According to the parties, the disputed terms are (1) "Pleat", (2) "A Plurality of Longitudinal Pleats", (3) "Over a Substantial Portion of the Height" and "Over Substantially the Entire height of a Pleat Leg", (4) "Laid-Over State", and (5) "Gap".<sup>2</sup> This Court, as discussed below, has provided interpretations of the disputed claims.

#### PROCEDURAL HISTORY

Pall and Cuno have been litigating their positions in this Court since December 30, 1997 (the "1997 Action"). In the 1997 Action, Pall asserted that Cuno's Polypro XL and LifeAssure products infringed U.S. Patents 5,543,047 ("'047 Patent") and 5,690,765 ("'765 Patent"), which relate to a spiral pleated filter and the method of making the filter, respectively. In September

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<sup>1</sup> Any arguments raised for the first time in reply briefs or letters filed subsequent to the briefs will not be considered by this Court in rendering its decision.

<sup>2</sup> After the construction claim issue was fully briefed, the parties submitted letters disputing the meaning of certain other terms of the claim language. This Order does not address any terms other than the five set forth herein. If the parties require further claim construction, they should notify the Court in writing.

2000, this Court conducted a Markman hearing in order to construe disputed claims. By Order, dated September 7, 2001, the Court construed the disputed term, "intimate contact," in accordance with Plaintiff's proposed construction. On September 30, 2002, the Court awarded summary judgment to Pall regarding Cuno's infringement of their patents.

During the litigation of the 1997 Action, Cuno developed new products (the spiral-W filters) seeking to avoid infringement. Pall brought a second lawsuit, the instant action, against Cuno alleging that the new products, despite the changes, still infringed their patents. On February 10, 2003, Pall moved this Court to preliminarily enjoin Cuno from manufacturing the spiral-W pleated filters. On July 17, 2003, Magistrate Judge E. Thomas Boyle recommended that the preliminary injunction be denied. On September 30, 2003, this Court adopted Judge Boyle's recommendation.

In November 2004, the parties requested that they be permitted to file motions for summary judgment as to the 1997 Action and the underlying action. As a prelude to the motions for summary judgment, the parties submitted motions for claim construction of five disputed terms. This Order addresses the meaning of such terms.

### FACTUAL BACKGROUND

Pall is a worldwide manufacturer of filters that are used in many industries for a variety of ultra-pure filtration applications. The filters are used, for example, to remove particulates, impurities, bacteria and contaminants in the electronics, computer, food and pharmaceutical industries. The filters are shaped in a cylinder, surrounded by a perforated cage containing a pleated filter element. In use, contaminated fluid enters the outside of the cage and passes through the cage, toward the center of the filter element. The filter medium, that is, the fabric through which the fluid passes, removes the contaminants from the fluid, and the fluid then exits through the inner core of the filter.

The efficiency and life expectancy of a filter depend directly on how much filter surface area is available for filtration. The larger the amount of surface area available, the more efficient and long-lasting the filter. However, an increase in the amount of surface area typically results in a larger product, which is not usually desirable. The goal and challenge in the industry has been to somehow maximize the available surface area while keeping the size of the filter units as small as possible. For approximately fifty years prior to the Pall invention at issue here, filter designers were not able to

satisfactorily increase the filtering capacity of the filter without also altering the external dimensions of the filter itself.

In 1989, however, engineers at Pall developed a filter that overcame these deficiencies. Pall created a filter containing curved or laid-over pleats that could be packed together closely so that the available surface area was increased, while still allowing a proper flow of liquid between and through the pleats. The solution to the half-century old problem was to place the filter media between unique drainage materials that, even when in close contact, created small void spaces and allowed fluid to flow freely to all parts of the tightly-packed pleats.

The invention was a major breakthrough, and the product became an immediate commercial success. Pall was awarded a prestigious design award in recognition of the significance of the invention. In order to protect its interests in the filter design, and to exclude others from using the technology without Pall's permission, Pall filed for patent protection for the filter design and the process of making the filters. In August 1996, Pall was awarded the '047 patent by the United States Patent and Trademark Office ("PTO"), and in November 1997 Pall received a patent on the process itself, constituting the '765 patent.

Cuno, like Pall, is a world leader in the design, manufacture and marketing of filtration products. Cuno has supplied filters to the electronics, beverage, pharmaceutical and

biotechnology industries for decades. Not surprisingly, Pall and Cuno are aggressive competitors in this field. Cuno manufactured and sold the adjudged infringing filters from, at least, late 2001 through May 2004. Cuno contends that the infringing filters were replaced by a wholly different product, the accused infringing filters, namely the spiral-W filters. (Def.'s Mem. in Supp. 9.) The accused spiral-W filters contain between 46 and 125 pleats. The pleats are not all the same height; some pleats are tall and some are short, which creates spaces around the core of the filter element. (Id.) While Pall does not contest that the spiral-w filter contains pleats with alternating height, it alleges that the accused filter also has four to eight pleats of equal or nearly equal height, which are identical to the pleats found in the infringing filters that are the subject of the 1997 Action. (Pl.'s Mem. in Supp. 12.) The parties also differ as to the extent of the spaces created by the alternating height of the pleats.

Pall asserts that Cuno has infringed 110 claims in the '047 and '765 patents. Pall alleges that Cuno has infringed claims 1-7, 9-14, 18-22, 24-26, 33-37, 45-46, 48, 52-64, 68-79, 81-94, 97, and 105 of the '047 patent. However, only claims 1, 54 and 92 are independent of the others, while the remaining claims are dependent upon claims 1, 54, and 92. Regarding the '765 patent, Pall alleges infringement of claims 1-5, 8-9, 12-18, 23-26, 31, 33, 37-42, 51-

54, 58-59, 63-69, and 71-72 of which only claims 1, 8, and 39-41 are independent.<sup>3</sup>

The parties dispute the limitations of the asserted claims, however, it should be noted that this Court's previous ruling in the 1997 Action as to "intimate contact" is still applicable. Based on the parties' briefs, the following constitutes the Court's construction of the terms "Pleat", "A Plurality of Longitudinal Pleats", "Over a Substantial Portion of the Height" and "Over Substantially the Entire height of a Pleat Leg", "Laid-Over State", and "Gap" as set forth in the '047 and '765 patents.

## DISCUSSION

### I. Legal Standard

Resolution of patent infringement claims requires a two-step analysis. First, the court must construe the meaning and scope of the patent claim; second, the patent claim must be compared to the accused design to determine if there has been an infringement. See Markman v. Westview Instruments, Inc., 52 F.3d 967, 976 (Fed. Cir. 1995), aff'd, 517 U.S. 370, 116 S. Ct. 1384

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<sup>3</sup>As noted by the district court in Dow Chemical Company v. Astro-Valcour, Inc., 47 F. Supp. 2d 294, 299 n.2 (N.D.N.Y. 1999), an "'independent claim does not refer to any other claim of the patent and is read separately to determine its scope[;] [a] dependent claim refers to at least one other claim in the patent, includes all of the limitations of the claim to which it refers, and specifies a further limitation on that claim.'" (quoting Jeneric/Pentron, Inc. v. Dillon Co., Inc., No. 98-CV-818, 1999 WL 66537, at \*9 (D. Conn. Feb. 3, 1999)).

(1996). The first question presents a legal question to be resolved by the courts, while the second question is generally reserved for the fact finder. See Markman, 52 F.2d at 981 (noting, however, that the court may use its construction of the claim in framing its jury charge as well as in deciding dispositive motions).

In 2005, the Federal Circuit decided Phillips v. AWH Corporation, in which it clarified prior decisions and provided guidance with respect to claim construction. 415 F.3d 1303 (Fed. Cir. 2005). When construing a patent claim, courts should start with the words of the claims, which are to be given their ordinary and customary meaning. Id. at 1312-13. "[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art . . . at the time of the invention." Id. at 1313; see also T.M. Patents, L.P. v. Internat'l Bus. Mach. Corp., 72 F. Supp. 2d at 380 (S.D.N.Y. 1999) ("[W]ords of a claim are to be construed in accordance with their ordinary meaning to persons in the relevant field of technology, unless it appears that the inventor used them otherwise."). "However, a patentee may choose to be her own lexicographer and use terms in a manner other than their ordinary meaning, as long as the special definition is clearly stated in the patent specification or file history." Novo Nordisk A/S v. Becton



Dickinson & Co., No. 96-CV-9506, 2000 U.S. Dist. LEXIS 3384, at \*4 (S.D.N.Y. March 21, 2000).

In construing a patent claim, the Federal Circuit has long instructed that courts must first consider intrinsic evidence, but also may resort to extrinsic evidence such as expert testimony if unable to make a determination based solely on the intrinsic evidence. See Vitrionics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996). Intrinsic evidence consists of the language of the patent itself and its accompanying claims, the specifications accompanying the claims, and the prosecution history before the PTO. Id. Together, these sources are "the most significant source of the legally operative meaning of disputed claim language." Id. Furthermore, "[t]he claim terms should not be read in a vacuum but must be read in light of the specification, which the Federal Circuit has made clear is the 'single best guide to the meaning of a disputed term.'" Aqua Prods., Inc. v. Intex Recreations Corp., No. 06-CV-1746, 2007 U.S. Dist. LEXIS 41496, at \*5 (June 5, 2007) (quoting Phillips, 415 F.3d at 1315); see also Markman, 52 F.3d at 979 (holding that the claims "must be read in view of the specification, of which they are a part."). The specifications "may act as a sort of dictionary, which explains the invention and may define terms used in the claims." Markman, 52 F.3d at 978.

On the other hand, extrinsic evidence consists of expert testimony, dictionaries, or learned treatises. While extrinsic evidence can be useful and may be relied on, courts must use discretion when considering extrinsic evidence and assign the appropriate weight to such evidence. Phillips, 415 F.3d at 1319, 1324 ("The sequence of steps used by the judge in consulting various sources is not important; what matters is for the court to attach the appropriate weight to be assigned to those sources in light of the statutes and policies that inform patent law."); see also Karlin Tech., Inc. v. Surgical Dynamics, Inc., 177 F.3d 968, 971 (Fed. Cir. 1999) ("The court may receive extrinsic evidence to educate itself about the invention and the relevant technology, but the court may not use extrinsic evidence to arrive at a claim construction that is clearly at odds with the construction mandated by the intrinsic evidence."). Thus, extrinsic evidence may not "contradict the manifest meaning of the claims as set forth, even by implication, in the specifications and prosecution history." Novo Nordisk, 2000 U.S. Dist. LEXIS 3384, at \*6 (citing Vitrionics, 90 F.3d at 1584-85).

## II. Construction Of Disputed Claims

Here, the parties differ as to the proper interpretation of the terms "Pleat", "A Plurality of Longitudinal Pleats", "Over a Substantial Portion of the Height" and "Over Substantially the

Entire height of a Pleat Leg", "Laid-Over State", and "Gap." This Court provides the following constructions for each of these terms.

A. Pleat

Cuno and Pall have submitted competing constructions of the term Pleat -- which appears literally hundreds of times in the '047 and '765 Patents. Pall asserts that the proper construction of the term is "two legs which are joined to one another at a crown and to a leg of an adjacent pleat at a root." Cuno argues that the term should mean "two legs which are joined to one another at the crown of the outer periphery of the filter element and which are joined to a leg of an adjacent pleat at the root of the inner periphery of the filter element." This Court finds that Pall's construction of this claim is proper.

Applying the legal standard, stated above, to the construction of the term Pleat results in a determination that it has a meaning that is broader than Cuno asserts. To interpret a term, this Court must first consider the words of the claim and all other intrinsic evidence. In this case, the consideration of intrinsic evidence ends the inquiry and provides this Court with certainty as to the meaning of this disputed term.

Pall's asserted definition of the term Pleat is supported by the wording of the claims themselves. The wording of the 143 patent claims of the asserted patents does not contain language that requires the Pleats to have crowns and roots located at the

outer and inner peripheries of the filter element. Rather, the claim language Pleat is somewhat broader. Specifically, claim 1 of the '047 patent, provides that each pleat has "a pair of legs, each of the legs having a first and a second surface." '047 patent, col. 26, lines 19-20. Claims 54 and 92 of the '047 patent state, in pertinent part, that

each of the pleats has a curved configuration and includes a crown, a root, and a pair of legs, . . . the legs of each pleat being joined to one another at the crown and joined to a leg of an adjacent pleat at the root . . . .

'047 patent, col. 30, lines 5-9; '047 patent, col. 32, lines 34-39.

Other intrinsic evidence also supports Pall's construction of the term Pleat. The specifications of the asserted patents describes the term Pleat broadly without limiting the crowns and roots of the Pleats to be located at the outer and inner peripheries of the filter element. '047 patent, col. 2, lines 8-10 ("each of the pleats having a pair of legs. Each of the legs has a first surface and a second surface.").

Cuno argues, however, that the specifications, specifically the preferred embodiments, should limit the construing of the term Pleat to include crowns and roots that are joined at the outer periphery and inner periphery of the filter element, respectively. (Def.'s Mem. in Supp. 15.) This Court declines to agree with Cuno's argument. The Federal Circuit has made clear that descriptions and drawings of the preferred embodiments are not

to be used to limit the language of the claims. See Phillips, 415 F.3d at 1323 ("although the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments"); Home Diagnostics, Inc. v. Lifescan, Inc., 381 F.3d 1352, 1355 (Fed. Cir. 2004); Anchor Wall Systems, Inc. v. Rockwood Retaining Walls, Inc., 340 F.3d 1298, 1306-7 (Fed. Cir. 2003). Thus, despite the fact that the patents contain a preferred embodiment, which may show and describe crowns and roots that are joined at the outer and inner peripheries, the term Pleat is not construed to contain such a limitation. See Phillips, 415 F.3d at 1323 (discussing the importance of not "importing limitations from the specifications into the claims").

B. A Plurality Of Longitudinal Pleats

This Court construes the term "A Plurality of Longitudinal Pleats" in conformity with neither parties' proposed definition. Cuno argues that this term means "a sufficient number of longitudinal pleats to form a cylindrical filter element with pleats in intimate contact over substantially their entire height." Pall takes the position that the term means "two or more longitudinal pleats." Having reviewed the intrinsic evidence and considered the parties' positions, this Court construes this term to mean a sufficient number of longitudinal pleats to form a cylindrical filter element.

Intrinsically, the claims themselves indicate that this term must mean that the filter contain some number of pleats forming a cylindrical filter. For instance, Claim 1 of the '047 Patent states:

A filter comprising:

a cylindrical filter element having a longitudinal axis, first and second end surfaces, and a plurality of longitudinal pleats, each of the pleats having a pair of legs, each of the legs having a first and a second surface, the pleats being in a laid-over state in which the first surface of one leg of one pleat is in intimate contact with the first surface of an adjoining leg of said one pleat and the second surface of said one leg is in intimate contact with the second surface of an adjoining leg of an adjacent pleat over substantially the entire height of each leg and over a continuous region extending for at least approximately 50% of the axial length of the filter element; and

a first impervious end cap connected to the first end surface of the filter element.

'047 patent, col. 26, lines 16-31 (emphasis added).

Pall argues that a plurality of longitudinal pleats should be construed to mean two or more pleats. In support of this construction, Pall cites to the patent specifications, in which it uses "plurality" interchangeably with "two or more." The specifications to which Pall cites do not use plurality with respect to longitudinal pleats. '047 patent, col. 5, lines 30-34; '047 patent, col. 10, lines 1-5. The specifications that describe longitudinal pleats speak to a cylindrical filter element, which

has a plurality of longitudinal pleats. '047 patent, col. 2, lines 5-8, 17-19. There is no way to read the claim language and specifications without the construction that, however many pleats comprise the filter element, there must be enough so that they form a cylinder.

Cuno argues that the term, A Plurality of Longitudinal Pleats, must also include intimate contact along substantially the entire height of each pleat. Pall counters with the principal of claim differentiation, stating that under Cuno's proposed construction, certain claims would be rendered superfluous. See TurboCare Div. of Demag Delaval Turbomachinery Corp. v. Gen. Elec. Co., 264 F.3d 1111, 1123 (Fed. Cir. 2001) (holding that claim terms should not be read to contain a limitation "where another claim restricts the invention in the [same] manner"); Comark Commc'ns, Inc. v. Harris Corp., 156 F.3d 1182, 1187 (Fed. Cir. 1998).

This Court finds that Cuno's definition limits the disputed language in a way that would render language of certain claims, including language contained in claims 39 and 40 of the '765 Patent, meaningless. As Pall notes, the patent claims have different scopes and do not all require that every pleat be in intimate contact, as suggested by Cuno. For example, in the '765 patent, claim 8 states that intimate contact must exist between the "first surface of a first leg of one pleat with the first surface of an adjoining leg of said one pleat and a second surface of an

adjoining leg of an adjacent pleat[,]" while claim 39 requires intimate contact with respect to "each of the plurality of pleats" and claim 40 with respect to "each pleat in the filter element." Although the patent claims include the terms "plurality of the longitudinal pleat" and "intimate contact" in the same claim, there are many words in between these terms and, taken together with the other claims of the '047 and '765 patents, Cuno's proposed narrow construction would render other claims redundant.

C. Over A Substantial Portion Of The Height/Over Substantially The Entire height Of A Pleat Leg<sup>4</sup>

This Court finds that the term "over a substantial portion of the height" means largely but not necessarily wholly the height of a pleat leg including at least 50% of the leg height. This construction, which Pall has argued for, is intrinsically supported. Cuno's proposed construction - to include as much of the pleat height as is practically possible - is not supported intrinsically. Furthermore, the Court declines, once again, to impose limits on the claims that do not appear in the claim language or the other intrinsic evidence other than preferred embodiments.

The claims and the specification of the asserted patents support a claim construction that "over a substantial portion of

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<sup>4</sup> The parties have agreed that the phrase "substantial portion of the height," which appears in several claims of the '765 patent, shall have the same meaning that is ascribed to the phrase "substantially the entire height."



the height" means largely but not necessarily wholly the height of the filter including at least 50% of the height. The relevant part of claims 1 and 54 of the '047 patent provide that there is intimate contact "over substantially the entire height of each leg and over a continuous region extending for at least approximately 50% of the" length of the filter element. '047 patent, col. 26, lines 26-28; '047 patent, col. 30, lines 14-16. Claim 92 of the '047 patent states that there is intimate contact "over substantially the entire height of each leg and over a continuous region extending for at least approximately 95% of the longitudinal length of the pleated filter element." '047 patent, col. 32, lines 45-48. Similarly, claims 1, 8, and 40-41 of the '765 patent contain almost identical language to the language in claims 1 and 54 of the '047 patent, and claim 39 of the '765 patent tracks the language in claim 92 of the '765 patent.

Cuno argues that, although "substantially" and "at least 50%" appear in the same claim, "at least 50%" modifies the length of the filter element and not the pleat height. (Def.'s Opp'n 28.) While the Court takes note of Cuno's point, the specification, albeit in the description of preferred embodiments, seems to use the terms substantial, significant, entire, portion, and at least 50% interchangeably when describing the pleat heights and the axial length of the filter element. See, e.g., '047 patent, col. 4, lines 5-10 ("the opposing inner surfaces 11d of the legs 11a of

each pleat 11 are in intimate contact with one another over substantially the entire height h of the legs extending for a significant portion of the axial length of the filter length.") (emphasis added). Moreover, there is nothing in the intrinsic evidence that supports Cuno's proposed construction - as much as practically possible.

Cuno also emphasizes the word "entire" arguing that the patentee must have chosen to use the word "entire" for a reason and the only logical reason is to "convey the intent that intimate contact must occur over as much of the height of the pleats as possible." (Def.'s Mem. in Supp. 19.) This argument is completely unsupported by the evidence. Moreover, it is belied by the parties' agreement to ascribe the same meaning to the phrases "substantially the entire height" and a "substantial portion of the height."

Additionally, the specification does not limit the claim in the manner that Cuno asserts. While the specification includes preferred embodiments, which express a preference for maximizing pleat leg heights and minimizing gaps, nowhere does the specification require that the degree of intimate contact equal as much of the pleat height as practically possible. In fact, the claims and the specifications expressly state that intimate contact exist "over substantially the entire height . . . for at least 50%

of the axial length of the filter element." '047 patent, col. 2, lines 14-16.

Cuno's argument that the prosecution history does not support Pall's position is untenable. The examiner stated that "over substantially the entire height of the legs of the pleats and a continuous region existing for at least 50% of the axial length of the element, the pleats are in intimate contact." (Korniczky Decl., Ex. 5 p. 188.) Accordingly, the prosecution history supports Pall's position and this Court's finding. To support a finding that the intended meaning was as much as possible, the examiner's writings would have been different. For instance, if the examiner was concerned that the claim be limited to "as much as possible," there would have been a more careful use of the terms.

Finally, this Court considered this language when it construed the term "intimate contact" in the 1997 Action.<sup>5</sup> The Court held that the

meaning of the term 'intimate contact' and the examples set forth in the specifications require a layering of drainage and filter materials and laid-over pleating such that contact between the adjacent pleat legs would be substantially continuous; that is, over at least 50 percent of the axial length of the filter element.

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<sup>5</sup>To be clear, the Court did not construe the language "over substantially the entire height" in the 1997 Action, but it did consider the language and use it in its construction of intimate contact.

Pall Corp. v. Cuno Inc., No. 95-CV-7599, 2001 U.S. Dist. LEXIS 16778, at \*24-45 (E.D.N.Y. Sept. 7, 2001) ("Pall I"). Based on the intrinsic evidence, the Court declines to assign any other meaning to "over substantially the entire height" than as set forth in this Order. That is, "over substantially the entire height" means largely but not necessarily wholly the height of a pleat leg, including at least 50% of the height.

D. Laid-Over State

The term Laid-Over State is construed to mean a condition in which the pleats have leg surfaces in intimate contact and pleat heights that are greater than the distance between the outer and inner peripheries of the filter element. This construction, proposed by Cuno, is directly supported by the intrinsic evidence.

The claims do not define the term "laid-over state." The parties agree, however, that, in this instance, the inventors of the patents have acted as their own lexicographers and provided a definition of the term "laid-over state," and that definition is controlling. See Novo Nordisk, 2000 U.S. Dist. LEXIS 3384, at \*4. The parties disagree, however, as to that definition. Cuno, citing to the description of the preferred embodiments in the specification, argues that "laid-over state" means "a condition in which the surfaces of the legs of the pleats are in intimate contact and the height of each pleat is greater than the distance between the inner and outer peripheries of the filter element."

Pall, citing to the Summary of the Invention, seeks to add the following to Cuno's proposed construction: "(i.e.,  $[D-d]/2$ ) so that the resulting pleat has a height and surface area usable for filtration much greater than that of a conventional filter of the same dimensions."

The Summary of the Invention provides that "[b]ecause the pleats are in a laid-over state or because the height of each pleat is greater than the difference between the outer and inner radii, the height of the pleats is much larger than that of a conventional filter of the same dimensions." '047 patent, col. 2, lines 23-27. In this section, the patent teaches that the term "laid-over state" means a condition in which the height of each pleat is greater than the difference between the outer and inner radii. This condition - laid-over state - involves pleats whose heights are much larger than that of a conventional filter. Further, in the description of preferred embodiments, the inventor explicitly defines laid-over state.

The condition illustrated in FIGS. 2 and 3 in which the surfaces of the legs 11a of the pleats 11 are in intimate contact and in which the height h of each pleat 11 is greater than the distance between the inner and outer peripheries of the filter element 10 (i.e.,  $[D-d]/2$  in FIG. 2) will be referred to as a laid-over state.

'047 patent, col. 4, lines 18-23. The inventor expressly and unambiguously defined "laid-over state" as a condition in which the surfaces of the legs of the pleats are in intimate contact and in

which the height of each pleat is greater than the distance between the inner and outer peripheries of the filter element. The language that Pall proposes to add to this definition applies to one preferred embodiment - (i.e.,  $[D-d]/2$ ) - and compares its filter to other filters. Since the patentee chose to expressly define this term, such definition controls and the Court declines to include the proposed limitations in the definition. See Aqua Prods., 2007 U.S. Dist. LEXIS 41496, at \*6 ("the patentee's definition of the term controls the claim construction over any general meaning for a term") (citing Vitronics, 90 F.3d at 1582); see also Phillips, 415 F.3d at 1323.

E. Gap

Pall asserts that the term "gap" should be construed by the Court to mean spaces between opposing surfaces of the pleat legs. Cuno argues that limitations on the size and geometric shape of the gap should be included in the asserted patents. This Court disagrees. As already stated, despite the fact that there may appear to be support for this construction in the preferred embodiment, it would be wrong to limit the term gap in such a manner.

The term gap appears in dependent claims 10-13 of the '047 patent.<sup>6</sup> The claim language reads as follows:

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<sup>6</sup> The Court notes the term "gap" only appears in dependant claims, which have no material effect on whether there is infringement on the independent claims. Said differently, the

10. A filter as claimed in claim 1 wherein gaps between opposing surfaces of the pleats adjoining a radially inner periphery of the filter element have a height of at most approximately a thickness  $t$  of each leg of the pleats.

11. A filter as claimed in claim 10 wherein the gaps have a height of at most approximately  $\frac{1}{2} t$ .

12. A filter as claimed in claim 1 wherein gaps between opposing surfaces of the pleats adjoining a radially outer periphery of the filter element have a height of at most approximately four times a thickness  $t$  of each leg of the pleat.

13. A filter as claimed in claim 12 wherein the gaps have a height of at most approximately  $2 t$ .

'047 patent, cols. 26-27, lines 62-67 and 1-7. The Summary of the Invention instructs that the pleating surfaces are "spaced by a gap." '047 patent, col. 2, line 42. The description of preferred embodiments further states that

[a]t the radially inner and outer ends of the pleats 11, small triangular gaps 11f are formed between the opposing internal surfaces 11d of adjoining legs 11a, and at the radially outer ends of the pleats 11, small triangular gaps 11g are formed between the opposing external surfaces 11e of adjoining legs 11a. However, in the present invention, the height of these gaps 11f and 11g as measured along the height of the pleats is preferably extremely small. The height of the gaps 11f adjoining the inner diameter of the filter element 10 is preferably no more than approximately  $t$  and more preferably no more than approximately  $\frac{1}{2} t$ , wherein  $t$  is the

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independent claims can be infringed regardless of the term gap.

thickness of the material forming the filter element 10, as shown in FIG. 3. The height of the gaps 11g adjoining the outer diameter of the filter element 10 is preferably no more than approximately 4 t and more preferably no more than approximately 2 t.

'047 patent, col. 4, lines 31-49.

Pall's assertion that the term gap should be assigned its dictionary definition is against case law. In Phillips, the Federal Circuit considered this exact proposition and held that, while the Court may consult extrinsic evidence, such as a dictionary, in determining the ordinary and customary meaning of claim language, "heavy reliance on the dictionary divorced from the intrinsic evidence risks transforming the meaning of the claim term to the artisan into the meaning of the term in the abstract." 415 F.3d at 1321-22 ("the use of the dictionary may extend patent protection beyond what should properly be afforded by the inventor's patent."). Rather, the Court should look to the intrinsic evidence to construe the claim language and consult a dictionary and other extrinsic evidence as needed. Id.

Cuno proposes that the term "gaps" means small triangular spaces formed between opposing internal surfaces of adjoining pleat legs at the radially inner ends of the pleats and between opposing external surfaces of adjoining pleat legs at the radially outer ends of the pleats. Cuno's proposal includes specific limitations set forth in different dependent claims as well as geometric and size limitations found in the preferred embodiment. Where, as



here, a term appears in more than one claim, it should not be construed so as to include the specific limitations set forth in the different claims. Doing so would render the dependent claims redundant. See Phillips, 415 F.3d at 1324-25. Having considered the intrinsic evidence, the Court finds that "gap" means a space formed between opposing surfaces of the pleat legs.

### CONCLUSION

For the reasons stated herein, the Court finds that (1) Pall's proposed construction of the term "pleat" is supported by the intrinsic evidence, (2) neither parties' proposed construction of the term "a plurality of longitudinal pleats" is supported by the intrinsic evidence; therefore, the Court construes the term to mean a sufficient number of longitudinal pleats to form a cylindrical filter element, (3) Pall's proposed construction of the term "over substantially the entire height" is supported by the intrinsic evidence, (4) Cuno's proposed construction of the term "laid-over state" is supported by the intrinsic evidence, and (5) Pall's proposed construction of the term "gap" is supported by the intrinsic evidence. The foregoing constitutes the decision and Order of the Court.

Each party is directed to file its memorandum in support of summary judgment no later than Monday, October 1, 2007. Opposition papers are due no later than Tuesday, October 16, 2007, and reply briefs are due no later than Tuesday, October 23, 2007.

SO ORDERED.

/s/ JOANNA SEYBERT  
Joanna Seybert, U.S.D.J.

Dated: Central Islip, New York  
August 14, 2007